

3.18 NOXIOUS WEEDS

Noxious weeds are undesirable, non-native invasive plant species that have negative impacts on crops, native plant communities, wildlife, livestock, and the management of natural or agricultural resources. Transportation systems can facilitate the spread of plants through the movement of seed and plant parts on motor vehicles. Noxious weeds are commonly spread through various construction activities, including excavation and movement of borrow materials, land clearing, reclamation, and the mobilization of construction vehicles. Removal of existing vegetation and other ground disturbance activities may eradicate some of the weeds but could encourage germination of seeds in soil seed banks (areas with dormant seeds within the soil) and may allow the spread of noxious weeds through seed dispersal.

Management of noxious weeds is required under Federal Executive Order (EO) 13112, "Invasive Species"; the Federal Noxious Weeds Act; the Colorado Noxious Weed Act (Colorado Revised Statute Title 35, Article 5.5); Colorado EO D006-99, "Development and Implementation

of Noxious Weed Management Programs"; and Colorado EO D002-03, "Directing State Agencies to Coordinate Efforts for the Eradication of Tamarisk on State Lands." The State of Colorado, CDOT, and Pueblo County maintain lists of noxious weed species that may potentially be found in the New Pueblo Freeway project area. CDOT is responsible for taking measures to prevent the spread of noxious weeds on CDOT property, including right-of-way (ROW) (CDOT, 2000).

3.18.1 Affected Environment

A formal weed inventory (CH2M HILL, 2005i) was completed in October 2003 to determine the locations and densities of noxious weeds within and adjacent to the project area. Weed populations were mapped using a global positioning system. Weeds considered for the inventory included those managed by Pueblo County, CDOT, and the State of Colorado. A total of six species of noxious weeds were identified within the project area, as shown in **Exhibit 3.18-1**.

EXHIBIT 3.18-1

Noxious Weeds Present in the New Pueblo Freeway Survey Area

Common Name	Scientific Name	Pueblo County Weed List	Colorado Department of Transportation Weed List	State of Colorado Noxious Weeds List	Acreage within Survey Area
Field bindweed	<i>Convolvulus arvensis</i>	X	X	C ¹	3.75
Canada thistle	<i>Cirsium arvense</i>	X	X	B ²	42.48
Kochia	<i>Kochia scoparia</i>	X			266.27
Russian olive	<i>Elaeagnus angustifolia</i>		X	B	82.27
Russian thistle	<i>Salsola collina</i>	X			157.04
Tamarisk	<i>Tamarix ramosissima</i>	X	X	B	128.39

Source: CH2M HILL, 2005i.

¹ List C noxious weed species are species for which the Commissioner of Agriculture (in consultation with the state noxious weed advisory committee, local governments, and other interested parties) will develop and implement state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands. The goal of such plans will not be to stop the continued spread of these species but to provide additional educational, research, and biological control resources to jurisdictions that choose to require management of List C species.

² List B noxious weed species are species for which the Commissioner of Agriculture, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, will develop and implement state noxious weed management plans designed to stop the continued spread of these species. Until such time as these plans are developed and implemented by rule, all persons are recommended to manage List B species but are not required to do so by these rules (although other state or local jurisdictions may require such action).

Three of the identified species (field bindweed, Canada thistle, and tamarisk) are listed as noxious weeds by the State of Colorado, CDOT, and Pueblo County. Russian olive is listed as a noxious weed by both CDOT and the State of Colorado. The remaining two species (kochia and Russian thistle) are managed solely by Pueblo County. CDOT has an active weed control program, and conditions may have changed since the formal weed inventory was conducted in October 2003. Surveys will be updated during growing season prior to project construction.

Due to the disturbed nature of the I-25 corridor through Pueblo, most of the undeveloped land within the project area contains noxious weeds. Although noxious weeds were identified throughout the corridor, the majority of the noxious weed stands identified during the survey were located in the North Area (Phase 1) between 29th Street and 4th Street along both sides of Fountain Creek.

Kochia and Russian thistle were the dominant weed species identified during the survey and were most prevalent in the North Area (Phase 1) of the project corridor east of I-25, although high concentrations were identified in the Central Area (Phase 2) and South Area (Phase 2) as well. Field bindweed was evenly distributed throughout the project area but was generally limited to scattered individuals and small patches. Canada thistle and Russian olive were generally present in small patches and were concentrated primarily in the North Area (Phase 1); however, both species were largely absent in the stands of noxious weeds identified in the Central Area (Phase 2) and South Area (Phase 2). Tamarisk was more prevalent than both Canada thistle and Russian olive, generally present in medium-sized patches and identified throughout the project area. Detailed information about the existing site conditions and noxious weeds inventory can be found in the *Noxious Weeds Technical Memorandum, New Pueblo Freeway* (CH2M HILL, 2005i).

3.18.2 Environmental Consequences

3.18.2.1 No Action Alternative

The No Action Alternative would have no new direct impacts on the number or distribution of noxious weeds. Noxious weeds currently present in the project area would continue to grow and spread, although the weeds located within CDOT ROW would be managed under CDOT's noxious

weed management practices conducted through their interstate maintenance program.

3.18.2.2 Build Alternatives

The State of Colorado highway ROWs are increasingly at risk of noxious weed invasions. In Pueblo, any improvements to I-25 will require the removal of existing vegetation during construction. Site disturbance would eliminate some roadside noxious weeds but may encourage the establishment of noxious weeds; germination of seeds in soil seed banks; and the spread of noxious weeds through dispersal of seeds or plants by wind, construction equipment, vehicle undercarriages, or transport of soil.

Noxious weeds often thrive on disturbed sites and out-compete native vegetation. Impacts may occur through ground disturbance in areas currently infested with noxious weeds, which has the potential to spread those species to adjacent property as well as to wetland and riparian habitats not currently infested with noxious weeds. Areas adjacent to the project area may be impacted because noxious weeds can be spread by the transportation of topsoil that contains weed seeds and roots from one area to another during earth moving or on construction vehicles. Acres of noxious weeds within the project footprint have been estimated for both Build Alternatives and are presented in **Exhibit 3.18-2**. Note that impacted areas provide opportunities for eradication of noxious weeds through careful restoration and seeding of native plant communities.

EXHIBIT 3.18-2

Noxious Weed Occurrences within the Project Footprint

Alternative	Noxious Weeds (acres)
Existing I-25 Alternative	180.2
Modified I-25 Alternative (Preferred Alternative)	169.4

Source: CH2M HILL, 2005i.

I-25 = Interstate 25

3.18.3 Mitigation

Unless otherwise specified, the following mitigations apply to both the Existing I-25 Alternative and the Modified I-25 Alternative (Preferred Alternative).

- ❖ Prior to the start of construction activities, CDOT will conduct a new noxious weed survey to map existing weeds requiring mandatory eradication and management to stop their spread within the project area and develop and implement a Noxious Weed Management Plan that incorporates herbicides, mechanical removal, and potential biological controls in accordance with the Colorado Noxious Weed Act to control and prevent weed infestation and spread. CDOT will provide the Noxious Weed Management Plan to CPW for review prior to its completion.
- ❖ Measures to be used in all construction areas for either the Existing I-25 Alternative or the Modified I-25 Alternative (Preferred Alternative) to prevent the spread of noxious weeds will include the following:
 - Noxious weeds observed in and near the construction area at the onset of construction will be treated with herbicides or physically removed to prevent seed distribution into areas disturbed during construction. In sensitive areas, such as wetland and riparian areas, appropriate control measures will be implemented according to the Noxious Weed Management Plan.
 - Areas of topsoil salvage will be assessed for the presence and abundance of noxious weeds prior to salvage. Topsoil from heavily infested areas will be properly disposed of offsite or buried during construction. Contractor-furnished topsoil will be free of subsoil, refuse, stumps, roots, brush, weeds, or other substances detrimental to the development of vegetative growth.
- Disturbed areas will be reclaimed immediately after the completion of construction and seeded with an appropriate native seed mix. Seed will be certified for purity and weed seed content. In areas that cannot be immediately seeded due to the time of year, mulch and mulch tackifier (to hold the mulch in place) will be used for temporary erosion control until seeding can occur.
- Certified weed-free seed mixes and straw bales for use in stormwater management and erosion control will be specified in the plan sets for construction. Native grasses and forbs will be used on all CDOT ROW for revegetation purposes.
- All construction equipment will be thoroughly washed before being brought into the project area or being moved between construction sites to avoid introducing undesirable plants and noxious weeds. Equipment will remain on designated roadways and will stay out of weed-infested areas until these areas are treated.
- To the extent possible, weed management efforts will be coordinated with local jurisdictional agencies and adjacent landowners.
- After construction, CDOT ROW will be managed through standard CDOT maintenance operations.